

CLAIMS

1. Apparatus for interactively generating a display signal, the apparatus comprising
- 5 a receiver for receiving a broadcast signal, the broadcast signal comprising a plurality of datastreams each including image data defining a background object, and control parameters;
- 10 a foreground computer generated imagery (CGI) device for generating a foreground computer generated object (CGO);
- a mixer for combining the foreground CGO with background object image data from the receiver to generate the display signal; and
- 15 interaction means for receiving the control parameters from the receiver, monitoring the position of the foreground CGO, and adapting the display signal with reference to the monitored position of the foreground CGO and the received control parameters.
- 20 2. Apparatus according to claim 1 wherein the control parameters define the position(s) of one or more areas of interaction in the background object, and wherein the interaction means adapts the display signal when the position of the foreground CGO coincides with the position of a selected area of interaction.
- 25 3. Apparatus according to claim 2 wherein the control parameters define one or more rules associated with the or each area of interaction, and wherein the interaction means adapts the display signal in accordance with the or each rule associated with the selected area of interaction.
- 30 ^{SUSAT} 4. Apparatus according to any of the preceding claims wherein the interaction means adapts the display signal by adapting the foreground CGO input to the mixer.
- 35 ^{SUSAT} 5. Apparatus according to any of the preceding claims wherein the broadcast signal comprises a plurality of datastreams, the receiver transmits background object image data to the mixer from a selected one of the datastreams, the selected one of the datastreams being selected in

response to an upload request signal, and wherein the apparatus further comprises means for inputting upload request signals to the receiver in response to input from a user.

- 5 6. Apparatus according to claim 5 wherein the interaction means adapts the display signal by inputting an upload request signal to the receiver.

505a²⁷ 7. Apparatus according to any of the preceding claims further comprising a user operable controller for
10 controlling the foreground CGO generated by the foreground CGI device.

505a²⁸ 8. Apparatus according to any of the preceding claims wherein the control parameters define the three-dimensional position of a feature in the background object, and wherein
15 the interaction means causes the foreground CGO to be at least partially obscured when the monitored position of the foreground CGO lies behind the three-dimensional position of the feature.

9. Apparatus according to any of the preceding claims
20 wherein the image data defining a background object comprises video data.

10. A method of interactively generating a display signal, the method comprising

receiving a broadcast signal, the broadcast signal
25 comprising a plurality of datastreams each including image data defining a background object, and control parameters; generating a foreground computer generated object (CGO);

30 combining the foreground CGO with the background object image data to generate the display signal;

monitoring the position of the foreground CGO; and

adapting the display signal with reference to the monitored position of the foreground CGO and the received control parameters.

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